

## CRUDE OIL

### Reserves and Production

In 2002 Indonesia ranked seventeenth among world oil producers, with approximately 1.9 percent of the world's daily production. The GOI places Indonesia's crude oil reserves at 9.7 billion barrels, with proven reserves of 4.7 billion barrels and potential reserves of 5.0 billion barrels. The figures are slightly lower than in 2001. Oil exports were \$6.2 billion in 2002. Total oil and gas exports (including LNG) were \$12.1 billion in 2002 -- 21.2 percent of Indonesia's export earnings, down from 22.4 percent in 2001.

Indonesia crude and condensate production declined in 2002 to an average of 1.252 million barrels/day (b/d) consisting 1.120 million b/d of crude and 131,800 b/d of condensate. This was a 6.9 percent drop from the 2001 level of 1.344 million b/d (1.212 million b/d for crude and 131,900 b/d for condensate). Almost all oil producers (Caltex, CNOOC, Unocal, BP, Petrochina, Pertamina, Vico Total, and ConocoPhillips) reported declines. Continued sluggish investment and a decrease in new exploration were key factors behind the decline.

PT Caltex Pacific Indonesia's production, which accounted for 46.1 percent of the country's crude oil production in 2002, dropped to 577,300 b/d compared to 643,200 b/d in 2001, in large part due to the loss of its CPP block to the Siak regional government in August 2002. The Chinese National Offshore Oil Corporation (CNOOC) became an important industry player in 2002, becoming the second largest producer

after Caltex and accounting for more than 12 percent of all Indonesian production. Indonesian company Exspan bucked the lower production trend by recording by an 11 percent increase in 2002.

In 2003, Indonesia's overall crude oil production continued to decline to an unofficial 1.01 million b/d. Indonesia has a crude production quota of 1.317 million b/d (without condensate) from OPEC, but the country produced below that target, as a result of declining investment and maturing oil fields.

Nevertheless, the government is optimistic it can achieve an oil production target of 1.15 million b/d in 2004. BP Migas believes new production from several existing PSCs will reverse the decline, citing Unocal Indonesia (West Seno), Exspan Sumatra (Matra), ConocoPhillips Indonesia (Belanak), Total Indonesia (Tunu), and PetroChina (Ripah), among others.

Table: Crude and Condensate Production by major producers (1,000 Barrels/Day)

Company	2001	2002	Change (%)
Caltex	643.2	577.3	-10.2
CNOOC	125.7	114.9	-8.6
Exspan	77.0	85.5	11.0
Total	90.0	79.8	-11.3
ConocoPhillips	83.2	69.3	-16.7
Unocal	59.3	56.2	-5.2
BP	50.8	46.5	-8.5
Petrochina	45.8	42.4	-7.4
Pertamina	45.1	40.1	-11.1
Vico	40.8	36.2	-11.3
Others	83.1	103.3	24.3
<b>TOTAL</b>	<b>1,344.0</b>	<b>1,251.5</b>	<b>-6.9</b>

Source: MIGAS

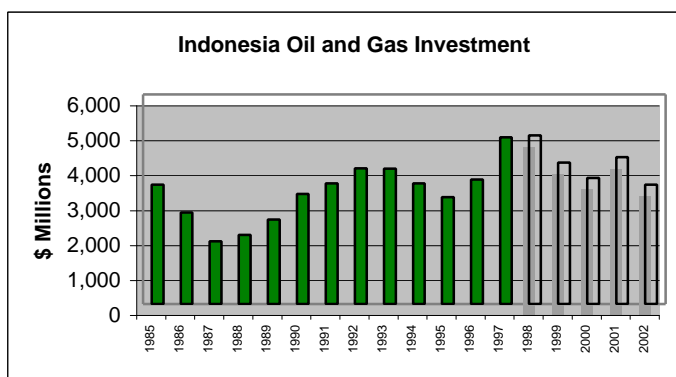
## Exploration and Investment

Of an estimated 60 oil basins, over 22 have been extensively explored. Most oil exploration is currently being carried out in the basins of Western Indonesia under PSCs. The bulk of Indonesia's oil reserves are located onshore and offshore in Central Sumatra and Kalimantan. The Government has placed increased emphasis on developing oil reserves in remote locations, such as Papua, where proven reserves are estimated at 138.4 million barrels.

The oil and gas industry today faces several crucial problems, particularly in the upstream sector, due to its aging oil and gas assets. Officials hope oil contractors will aggressively increase exploration activities to look for new reserves. With no significant oil discoveries in western Indonesia in the last 10 years, the government hopes eastern Indonesia's frontier and deep-sea areas may contain sizeable oil reserves.

The number of exploration drilling wells completed in 2002 dropped sharply to 53, consisting of 33 wildcat wells and 20 appraisal wells. Traditionally high, the associated success ratio (successful wells versus wells drilled) reached 54.7 percent, up from 48.1 percent in 2001 and 52.4 percent in 2000.

Pertamina and BP Migas reported that many oil companies shelved a number of investment plans in 2002 due to uncertainty in a number of important areas, such as contract sanctity, regional autonomy, security, manpower, taxes, and the Oil and Gas Law implementing regulations. According to the Energy Ministry's Oil and Gas Directorate (MIGAS), oil companies realized 92 percent of their budgeted expenditures in 2002, a total of \$3.4 billion. This reflects a 19 percent decline from \$4.2 billion in 2001. In 2003, the government forecast that oil companies would expend \$6.7 billion, including \$2.5 billion for exploration and development and \$3.6 billion for production.



## Seismic Activities

According to MIGAS, a total of 20,337 kilometers of seismic combined 2-D and 3-D

activities was carried out in 2002, figures which have trended steadily downward since the 1997 peak.

## Exploration Blocks Awarded

The government awarded 15 oil and gas exploration blocks in 2003, compared with one in 2002 and six in 2001. In August 2003, eight of the fifteen blocks were awarded through a regular bidding process, while seven were awarded in December through a special bidding round for blocks that were unawarded previously. Participants in the bidding rounds were predominantly small and

medium oil companies, some with little previous experience in Indonesia. The government plans to formally offer an additional 10 blocks in 2004. The fifteen contracts are Merangin I Onshore (Medco), Merangin II Onshore (PT Sele Raya), Bulu Offshore (PT Petroland Energy), NE Madura I (KNOC and PIDC consortium), NE Madura II (KNOC and PIDC consortium), South Madura (Eksindo Petroleum Tabuhan), North Bali II (Santos), and Tarakan (Provident Energy), Anambas Offshore (Genting Oil), Palmerah Onshore (Tately NV), Biliton Offshore (Mitra Archipelago), Bangkanai Onshore (PT Elnusa), Bontang Offshore (PT Eksindo), Halmahera Offshore (PT Tri Visindo), W.Salawati Offshore (Pearl Oil), and Asmat Onshore (PT Indonesia Papua Petroleum). Exploration commitments by the winners totaled \$343.5 million with signing bonuses to the government totaling \$26.7 million.

The Government revamped procedures and improved some terms and conditions for exploration and production contracts in a bid to increase their attractiveness. Previously, oil and gas companies could only receive a concession through an official tender. Now, the government also accepts proposals for blocks without waiting for a formal bidding session. Under this special bidding process, after a company applies to acquire a new exploration block, the government invites other bidders to participate. If no other bidder emerges within a set timeframe, the government grants the block to the sole bidder. The government also offered some more attractive terms and conditions for new exploration blocks in 2003. Winning PSCs would get between 20 percent to 25 percent splits for oil and 35 percent to 45 percent for gas. Under

older PSC terms, companies generally receive a 15 percent split for oil and 30 percent split for gas. The government also set first tranche petroleum (FTP) at 10 percent.

The total number of active oil contracts through October 2003 was 160.

### **Mergers and Acquisitions**

Hong Kong-incorporated oil company China National Oil Offshore Company (CNOOC) acquired Repsol-YPF assets in Indonesia in January 2002, becoming the largest offshore oil producer in Indonesia.

Conoco's acquisition of Gulf Canada in 2001 led to a change of Gulf Indonesia Resources' president, but until September 2002 Conoco Indonesia and Gulf Indonesia Resources continued to exist as separate enterprises in Indonesia even as the Conoco parent company assumed 75% ownership of Gulf Indonesia Resources. Conoco purchased the remaining shares of Gulf Indonesia Resources in July 2002. The two units were merged in September 2002 to form ConocoPhillips Indonesia.

#### **Mergers:**

- Conoco & Phillips - ConocoPhillips, Sept 2002.
- Chevron & Texaco – ChevronTexaco, Sept 2001
- Santa Fe Snyder & Devon – Devon Energy Corp, Aug 2000.
- BP Amoco & Arco – BP, Apr 2000.
- TotalFina & Elf – TotalFinaElf Sam, Feb 2000.
- Exxon & Mobil – ExxonMobil Corp, Nov 1999.
- El Paso & Sonat – El Paso Energy Corp, Oct 1999.
- Total & Fina – TotalFina, Jun 1999.

Lasmo & Monument – Lasmo Plc, Jun 1999.

- Santa Fe & Snyder – Santa Fe Snyder Corp, May 1999.

- Nisseki & Mitsubishi Oil Co. – Nisseki Mitsubishi Abushild, Apr 1999.

- Kerr McGee & Oryx – Kerr McGee Corp, Feb 1999.

- BP & Amoco – BP Amoco Plc, Jan 1999.

- British Borneo & Hardy – British Borneo Oil & Gas Plc, Oct 1998.

- Ocean Energy & Seagull – Ocean Energy Inc, Jun 1997.

#### Takeovers:

- Conoco - Gulf Indonesia Resources, July 2002

- CNOOC - YPFMaxus, Jan 2002.

- PetroChina - Devon Energy, Apr 2002

- Husky Oil Ltd. – Renaissance energy, Aug 2000.

- Canadian Natural Resources – Ranger Oil, Jul 2000.

- Fortune (Indo Pacific) – GFB Resources (Java) Ltd, Jul 2000.

- Agip – British Borneo, May 2000.

- Singapore Petroleum Company Ltd – LL&E Indonesia, Jan 2000.

- Maple/Matrix – GFB Resources (Langsa) Ltd, Jan 2000.

## The Future

Pundits have been forecasting Indonesia's imminent shift from net oil exporter to net importer since at least the early 1970's. New discoveries and technological advances, such as enhanced oil recovery and deep-water exploitation, had postponed this transition to date. However, increasing consumption and a steady decline in production, coupled with lower exploration investment levels, means Indonesia is now likely to become

a net oil importer within the next few years.

To maintain its net exporter position, Indonesia should improve its fiscal terms for oil and gas production for both mature and frontier areas. In mature fields, the 85/15 (government/contractor) split for oil and 70/30 split for gas make thresholds higher than in other parts of the world. In frontier areas, where the split is 60/40 for gas and 65/35 for oil, the balance between risk and reward is generally viewed as insufficient to attract major exploration funds. These problems are exacerbated by small reserve accumulations and high infrastructure costs.

With substantial reserves of natural gas and coal, Indonesia could still remain a net oil exporter for a substantially longer period. To do so, however, the government has to implement legislation and policies that will rationalize use of Indonesia's energy resources. Energy policy reform will enhance efficient use of energy resources. Ideally, key measures would include:

- Proper incentives to encourage industry to expand the domestic use of natural gas and coal;
- Enhancement of Indonesia's new and existing production sharing contract (PSC) terms vis-à-vis other oil producing countries to make the PSCs more competitive;
- Improved GOI inter and intra ministry coordination to maximize efficiency and streamline new investment;
- Tax consolidation and improvement of the fiscal terms for oil and gas production; and

- Reinforcement of contract sanctity by honoring existing contracts, including LNG sales contracts, tax terms and refund VAT.

Issuance of implementing regulations for the 2001 Oil and Gas Law and 2002 Electricity Law will give Indonesia the opportunity to carry out some of the changes necessary to allow the country to rationalize its use of energy resources.

## PSC Update

**CHEVRON-TEXACO** is the single largest crude oil producer in Indonesia, accounting for almost 50 percent of the country's total production. Its wholly owned subsidiary, Caltex Pacific Indonesia (CPI), averaged 577,000 bopd in 2002, dipping to an unofficial 507,000 bopd in 2003, through its central Sumatra PSCs (Rokan, Siak and MFK). CPI also holds a 100% interest in the central Sumatra Kisaran block, which it acquired from the government in 2001. CPI expects to conduct first exploration drilling at Kisaran during 2004. Chevron Texaco also has a 25% non-operating interest in the South Natuna Sea Block B, operated by ConocoPhillips.

The company's downstream activities include sales of paraxylene, benzene and fuel catalysts to refineries in Java, and the company enjoys a sizable domestic market share of lubricants and fuel additives. Through its affiliate Amoseas Indonesia, the company operates a geothermal plant in Darajat, West Java.

After a one-year extension, CPI handed over the operation of Coastal Plain Pekanbaru (CPP) oil block in August 2002 to the Indonesian government

through BP Migas. In return, BP Migas handed over the oil block to a consortium of state oil and gas firm Pertamina and Riau Province's company PT Bumi Siak Pusaka under a 50-50 share agreement. The hand over ended CPI's 20-year contract to manage and operate the block, which is located onshore Riau. CPP produced about 42,000 b/d of oil at the time of the turnover.

CPI is working to improve workforce and production efficiencies. For 2004, CPI plans to invest between \$200 and \$300 million to optimize development of its mature oil fields. The company also offered a Voluntary Resignation Program (VRP) to employees in December 2003. 1,133 Caltex employees chose to participate in the program.

**EXXONMOBIL** was created from the merger of Exxon and Mobil in November 1999, leading to the consolidation of Exxon, Esso, and Mobil operations in Indonesia. ExxonMobil celebrated 100 years of doing business in Indonesia in 1998, including 30 years as a production-sharing contractor, 20 years as a producer of liquefied natural gas and 10 years as a producer of liquefied petroleum gas.

One of ExxonMobil's largest endeavors during 2002-2003 was its effort to extend its TAC for the Cepu block in East Java. Through purchases and acquisitions, ExxonMobil holds and operates a 100% participating interest with the block under a production sharing arrangement awarded by Pertamina in 1990. ExxonMobil has invested over \$400 million in Cepu. EM has made a significant discovery at Banyu-Urip, with estimated resources in excess of 250 million barrels of oil and significant volumes of gas. The TAC expires in 2010

and ExxonMobil has proposed a 30-year extension and up to \$2.6 billion capital investment to fully develop the block. The company estimates Banyu-Urip peak crude oil production of 165,000 b/d. Major gas supplies could be available for sale to meet existing shortfalls in East and Central Java. It estimates the project would generate annual gross revenues between \$700 million and \$1.2 billion at peak production.

Cepu extension talks between ExxonMobil, Pertamina and the GOI have been ongoing for three years. Despite progress on the negotiations during the latter part of 2003, a final agreement has yet to be signed. Successful Cepu contract negotiations will provide a basis for substantial economic benefits to Indonesia and East Java, and will send a strong positive signal to foreign investors.

Also in Central/East Java, ExxonMobil owns a 68 percent participating interest in the Madura PSC. In 2003, ExxonMobil continued negotiations with PT Indonesia Power to provide 80-100 mmcf/d of gas from the Madura PSC to Indonesia Power's Grati 766-MW combined cycle power plant in East Java.

In North Sumatra, ExxonMobil's natural gas operations include the Arun, Pase, South Lhoksukon, and North Sumatra Offshore fields. ExxonMobil also has a 50-percent participating interest in A-Block (ConocoPhillips is operator). During 2002 and 2003, ExxonMobil's gas supply contracts to the AAF and PIM I fertilizer plants lapsed; however, the company did provide 2003 supplies based on 2003 sales agreements. Currently, ExxonMobil is providing a limited quantity of gas to the new PIM II

fertilizer plant. Due to declining gas production at Arun, the government may have to acquire 8-10 LNG cargoes from abroad in 2004 if it decides to maintain like-kind gas supply to fertilizer plants and still comply with its LNG contractual requirements.

**UNOCAL** leads in the exploration of Indonesia's deepwater resources, discovering about 1.9 billion barrels of oil equivalent to date. In 2002, the company produced 56,233 b/d of oil and condensate and a total of 149.3 BCF of gas. The company budgeted \$569 million in expenditures in 2002, including \$250 million for East Kalimantan, \$244 million for Makassar Strait, \$44.5 million for Rapak and \$30 million for the Ganal and Sesulu blocks.

The company, through subsidiaries, is the operator of the East Kalimantan (95% working interest), Ganal, Sesulu, Rapak (80% working interest each) and Makassar Strait (90 percent working interest) PSCs. In December 2002, Unocal acquired a 50 percent non-operating interest in the Muara Bakau PSC, offshore East Kalimantan. In January 2003, the company agreed to farm in the deepwater Donggala PSC, adjacent to the Rapak PSC, acquiring a 19.55 percent non-operating interest.

In August 2003, Unocal began production at Indonesia's first deepwater field at West Seno, offshore East Kalimantan. West Seno production is expected to peak at 60,000 bopd and 150 mmcf/d of gas when the second phase of the project is completed in 2005. The company also plans to develop the Sadewa gas field in 2005 (150-600 BCF). In the mid-term, Unocal hopes to begin production at Gehem in 2006 and Merah Besar and

Ranggas in 2007. Merah Besar alone could produce as much as 190,000 barrels of oil equivalent per day.

In 2004, Unocal will continue exploration and appraisal drillings to add to its oil and gas reserves. The company currently pipes about 150 mmcf/d to the Bontang LNG plant, however, the company predicts gas production could reach 800 mmcf/d or greater by 2011. Future gas production could be absorbed by a variety of sources – Bontang's planned ninth LNG production train, a proposed LNG regasification facility in Java (2006), and a proposed East Kalimantan-Java gas pipeline (2010).

**BP** is one of the largest foreign investors in Indonesia. Through partnerships with upstream authority BP Migas, BP has invested over \$6 billion in its Indonesian operations over the last 30 years. After acquiring Arco's assets in 2000, every BP business stream – exploration and production, chemicals, downstream and solar) is represented in the company's Indonesia operations.

In Java, BP currently supplies 65% and 50% of the West Java and East Java gas markets. BP is the operator of the Offshore North West Java PSC (46%), which averaged 37,000 b/d of crude oil and 315 mmbtu/d of gas during 2002. In December 2003, BP and state electricity utility PLN signed a new Gas Sales and Purchase Agreement (GSPA) to supply up to 265 mmcf/d of natural gas to the Muara Karang and Tanjung Priok power plants until 2017.

BP is 100% operator of the Kangean PSC, whose Pangerungan gas field supplies the majority of East Java's domestic gas. Due to declining gas

production at Pangerungan, BP waived the preferential gas rights it had enjoyed since 1980. Gas supply interruptions due to a pipeline leak in January 2003 reduced the field's average gas supply from 180 mmcf/d to 100 mmcf/d, affecting industrial users. During 2003, BP has been in talks with the government over a 20-year extension of the Kangean PSC (which expires in 2010) to develop the Terang Sirasun gas field and boost production.

BP is the major shareholder and operator of the Tangguh LNG project, which encompasses three PSCs in the Berau-Bintuni Bay region of western Papua. The Tangguh gas fields contain 14.4 trillion cubic feet (TCF) of proven and certified natural gas reserves. The planned LNG processing plant will produce seven million tons of LNG per year from two initial processing trains.

The Indonesian government and BP have obtained market commitments for 7.65 million tons (MT) of Tangguh LNG per annum -- 2.6 MT of LNG per year to China's Fujian province for a 25 year term beginning 2007, 1.35 MT of LNG per year to South Korea's K Power and POSCO for a 20-year term beginning 2005, and 3.7 MT of LNG per year to the U.S. West Coast for a 20-year term beginning in 2007 (until Tangguh becomes operational LNG will likely come from the Bontang LNG facility in East Kalimantan). The GOI and BP also hope to ink new LNG supply contracts with Japan. The company's final decision on the project is not expected until sometime in 2004, making it unlikely that LNG production would begin until 2008.

BP is also considering a partnership with PLN to build an LNG regasification terminal in West Java. The terminal is

one of the options the government is considering to meet the growing domestic gas needs of West Java. The proposed project would cost between \$320 - \$380 million and supply West Java power plants with 500 mmcf of gas from BP's Tangguh LNG plant.

**CONOCOPHILLIPS** continues to streamline and refocus its Indonesian operations following the August 2002 merger of Conoco Inc. and Phillips Petroleum. The merger followed then-Conoco Inc.'s acquisition of Gulf Canada Resources in 2001.

During 2003, subsidiary Conoco Phillips Indonesia announced plans to change its investment criteria and focus on three core areas in Indonesia: South Sumatra, South Natuna Sea and East Java. In mid-2003, the company offered for sale its interest in five oil and gas blocks: Sebuku PSC south Makassar Strait (100 percent working interest); Kakap PSC offshore Natuna (31.25 percent operating interest); Block A PSC onshore Aceh (50 percent operating interest); Tungkal PSC south Sumatra (100 percent working interest); and South Jambi B PSC Sumatra (45 percent operating interest). In the second half of 2003, Conoco Phillips sold three of the offered blocks, Kakap PSC to local firm Star Energy, and Sebuku PSC and Tungkal PSC to Singapore-based Pearl Holdings Ltd. In October 2002, Pearl Holdings had acquired joint-operatorship and 30 percent working interest in the South Sumatra Jambi EOR from ConocoPhillips subsidiary Gulf Resources.

In August 2003, ConocoPhillips began supplying natural gas from its south Sumatra Corridor PSC to Singapore's

PowerGas, via the newly commissioned Grissik-Batam-Singapore gas pipeline. The company already supplies natural gas to Singapore's Sembawang Gas from its West Natuna gas fields (since 2001) and to Petronas' Duyong Complex offshore Malaysia from South Natuna Sea Block B (since August 2002). ConocoPhillips has been a major player in the pipeline gas business since 1998, when it began supplying gas from the South Sumatra Corridor Block PSC to the ChevronTexaco-operated Duri steamflood in central Sumatra.

The Belanak floating production, storage and offloading (FPSO) project at the South Natuna Sea Block B PSC, offshore West Natuna, is currently under development. The FPSO is slated to produce 100,000 boepd and process up to 400 mmcf of natural gas to meet the company's commitments to Singaporean and Malaysian customers. Belanak should be completed by mid-2005.

In offshore East Java, ConocoPhillips has an operating interest in the Ketapang block. The company believes the block has significant oil potential and began appraisal drilling in late 2003. Malaysia's Petronas has an equal, non-operating interest in the block.

ConocoPhillips is also a major player in the \$900 million South Sumatra to West Java gas development project. The project includes a 660-kilometer pipeline from ConocoPhillips Suban gas field in the Corridor Block to state-owned electricity utility PLN gas-fired power plants in West Java. In July 2003, the company signed a Heads of Agreement with PLN to supply 2.3 TCF of gas to the power plants beginning in 2006. It expects to sign final gas transportation



and gas supply agreements with PGN and PLN in early 2004.

**AMERADA HESS** consolidated its holdings in Indonesia during 2002-2003. In October 2002, the company farmed out its 70 percent working interest and operatorship in the Lematang PSC in Sumatra to Medco Energi. That year, Amerada Hess also transferred its 25 percent interest in UK-based Premier Oil in exchange for Premier's 23 percent interest in the Natuna Sea Block A PSC.

In April 2003, the company sold its 30 percent interest in its main producing asset, the Jabung PSC onshore Sumatra, to a consortium led by PetroChina International. This accounted for the company's drop in oil production from 4000 b/d in 2002 to 1000 b/d in 2003. Amerada Hess' present assets in Indonesia are the Pangkah Block in East Java (66%, operator), the Jambi-Merang block onshore South Sumatra (25%), the offshore West Natuna Block A (23%), and the Tanjung Aru block in the Makassar Strait (50%, operator).

During 2002-2003, Amerada Hess was involved in gas sales negotiations to supply gas from the Ujung Pangkah field to state-owned PLN power plant Gresik in East Java. In December 2002, the company signed an agreement to supply about 50 mmcf/d to Gresik. PLN would like Amerada Hess to supply an additional 100 mmcf/d to the plant, but the agreement may fail over PLN's inability to provide a standby letter of credit worth \$120 million. In July 2003, the company signed an MOU with the PT Petrokimia petrochemical plant in Gresik to supply 30-60 mmcf/d beginning 2005.

**MEDCO**, Indonesia's largest private oil company, began exporting crude oil in 2000 and formally changed its name to "PT Medco Energi Internasional Tbk." Medco is 85.5 percent owned by Mauritius-based New Links Energy Resources. New Links is 41 percent owned by Indonesia's Panigoro family, with another 41 percent by Thailand's PTT Exploration and Production and 19.9 percent by Credit Suisse First Boston. Public investors' stake in the Jakarta Stock Exchange-listed energy company is 5.24 percent. Medco, through its PT Exspan subsidiary, owns 14 oil and gas blocks throughout Indonesia. Of the 14 blocks, 7 are in production, while the rest are in the exploration phase.

Medco is the third-largest crude oil producer in Indonesia. As a result of acquisitions in 2001, crude oil production jumped to over 85,000 bopd in 2002. However, Medco reported that oil production dropped 17 percent to 70,200 bopd in 2003. Lower production in Medco's largest fields, Semoga and Kaji, in south Sumatra, are the primary reason for the production decline, which will continue into 2004. Medco's proven oil reserves now stand at 147 million barrels, while proven and probable reserves stand at 264 million barrels.

The company believes its future lies in natural gas development. Medco's gas reserves stand at 126 BCF proven, and 2.9 TCF proven and probable. Medco's gas production, estimated at 82 mmcf/d during 2003, is small in comparison to other companies, but growing. In addition to gas blocks in south Sumatra, Medco's Exspan Tomori Sulawesi holds a 50 percent operating stake in the Senoro-Toili JOB with PT Pertamina. The block has estimated natural gas reserves of 2.5 –

4 TCF. In August 2003, Exspan and Pertamina signed a MOU with U.S. company Marathon Oil Corporation. Under the terms of the MOU, Exspan and Pertamina would provide up to 6 MT of LNG per annum to Marathon's proposed Tijuana Regional Energy Center in Baja California, Mexico.

Medco's strategy for 2004 is to acquire producing oil and gas blocks that still have an upside exploration potential. The company plans to increase capital expenditures by 85 percent in 2004, to \$435 million, and operational expenditures by 70 percent to \$445 million. Medco revealed a significant element of its expansion plan in December 2003, when it launched a surprise takeover bid for Australian energy firm Novus. Novus holds non-operating interests in the East Java Brantas PSC (50 percent) and West Natuna Kakap PSC (25 percent). Both are producing gas blocks.

**CNOOC**, the China National Offshore Oil Company, became Indonesia's largest offshore oil producer (over 110,000 bopd) following its acquisition of RepsolYPF Indonesia in January 2002. CNOOC's holdings now include an operating 65.34% interest in the Offshore South East Sumatra PSC, a 36.72 percent interest in the Offshore Northwest Java PSC, a 25 percent interest in the West Madura PSC offshore East Java, a 50 percent interest in the Poleng TAC in East Java, and a 39.51 percent interest in the Malacca Strait PSC.

CNOOC's Indonesia strategy is to tap into the export market as well as get more involved in the domestic energy (i.e., natural gas) industry. CNOOC entered the LNG export business when it bought

a 12.5 percent stake in the \$3 billion Tangguh LNG project in late 2002. CNOOC hopes to increase its stake in the Papua-based potential LNG center even further. The company is seeking to block British Gas Group's plan to sell its 50 percent stake in the Muturi PSC (10.73 percent of the total project) to Japan's Mitsui. Both CNOOC and LNG Japan Corporation would like to buy all or part of BG Group's Tangguh share.

The company also laid the groundwork for possible participation in domestic energy development when it signed an MOU with national gas company PGN in September 2002. CNOOC agreed to participate in a proposed PGN gas pipeline project linking the gas-rich province of Kalimantan to Java. The ambitious \$1.7 billion project is under consideration, though there is potential competition from a proposed Java LNG receiving terminal to provide natural gas to the Java market.

During 2003, CNOOC held discussions with upstream authority BP Migas over whether the company could build a 90-km pipeline from its Pabelokan gas field (South East Sumatra PSC) in offshore West Java to planned gas-fired power plant at Cilegon in Banten. PGN is proposing that it build the pipeline and charge a toll fee for CNOOC to supply 120 mmcf/d to PLN Banten in 2006.

**PETROCHINA** operates six oil and gas blocks in Indonesia, the result of its April 2002 acquisition of Devon Energy. Four blocks are producing, while the remaining two are in exploration. The company operates the Jabung Block PSC onshore Jambi, Sumatra, which produces approximately 30,000 barrels of oil equivalent (boe) per year. PetroChina's

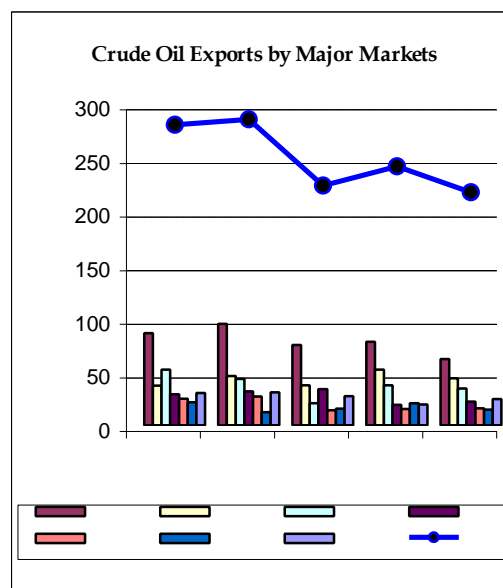
gas production received a boost in August 2003 with the opening of the South Sumatra-Batam-Singapore gas pipeline, which receives gas from the Jabung PSC.

## Marketing the Crude

Indonesia, through Pertamina, BP Migas and its foreign partners, sells crude oil using the Indonesia Crude Price (ICP) formula. Indonesian crude is generally low sulfur and waxy. Indonesia's representative Minas crude (in crude marketing terms, referred to as Sumatra Light Crude) produced in Central Sumatra has an American Petroleum Institute (API) gravity of 34.5 degrees at 60°F and a sulfur content of between 0.06 percent and 0.10 percent by weight.

Effective October 1, 1999, Pertamina changed the pricing formula (ICP) for official export prices of Indonesian crudes. The ICP formula has three components: the Asian Petroleum Price Index (APPI), Rim Intelligence Company, and Platts. The APPI component is derived from twice weekly APPI price assessments adjusted by a basket of regionally traded crude oils (including Indonesian Sumatra Light Crude and Malaysian Tapis) using a 52-week moving average. Pertamina lowered the portion of the APPI panel quotes from 33.3 percent to 20.0 percent and increased the portion of spot assessments of Platt and RIM to 40.0 percent each. The purpose of the adjustment was to better reflect prices in the world market by putting more emphasis on the spot market. The Ministry of Energy and Mineral Resources reviews the oil pricing formula semi-annually.

Asian countries are the largest markets for Indonesian crude. Japan accounted for 28.4 percent of Indonesian crude oil exports in 2002, followed by South Korea (20.2 percent), Australia (15.9 percent), China (10.2 percent), the United States (7.3 percent), and Singapore (6.7 percent).



In 2001, Pertamina opened an office in Singapore through its wholly owned Hong Kong-based subsidiary Pertamina Energy Trading (ex-Perta Oil). The new office promotes and facilitates trade in crude oil and fuel between Singapore and Indonesia, offers logistical services to Pertamina, and represents Pertamina's interests.

## Imports

Indonesia remains a significant importer of crude oil. In 2002, Indonesia imported 124.1 million barrels (an average of 340.1 thousand b/d), mainly from Nigeria (34.6 percent), Saudi Arabia (32 percent), China (6.3 %), Malaysia (5.6 percent), Vietnam (3.3 percent) and Iraq (3.1%). Oil product imports rose to 107 million barrels from 90 million barrels in 2001.